SURFACE MOUNT OPTOELECTRONIC COMPONENT

ABSTRACT

The invention relates to a surface mount optoelectronic component. A thick, electrically conductive material is used to serve as a base material for the assembly. An opaque plastic material is used to provide housing for the whole component. A cavity formed on a top surface of the optoelectronic component is designed within the plastic material. An optoelectronic chip is mounted within this cavity. This cavity is filled with a hard transparent or translucent resin material so that optical radiation may be transmitted or received via this window. Electrical connection(s) between the chip and the base material is/are provided by a metallic wire (4). Subsequent connections to external sub-systems, such as PCBs, are provided by the base material itself. No extra mechanical forming processes are necessary to create the connections. The base material extends all the way from a middle portion to a bottom surface of the optoelectronic component, and to one of the side surfaces, ultimately extending and protruding outside the package. The bottom surface is used for connection when a top illuminator is required. Alternatively, one of the side surfaces could be used for connection when the optoelectronic component is used as a side illuminator.